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**July 22, 2011**

SMART Board of Directors  
750 Lindaro Street,  
San Rafael, CA 94901

**SUBJECT: Report on review of expenditure & revenue analysis  
For Initial Operating Segment,  
Adoption of Resolution to comply with requirements of the Metropolitan  
Transportation Commission (MTC)**

Dear Board Members:

**RECOMMENDATION:** 1-Consider policy options provided below to finalize the financial plan for the SMART Rail & Pathway Initial Operating Segment. 2- Adopt attached Resolution complying with MTC's financial requirements. 3- Proceed with the release of Design-Build Request For Proposal for the Initial Operating Segment. 4- Proceed with issuing bonds to finance the design & construction of Initial Operating Segment.

**Executive Summary:**

This report reflects a recommended findings that adds to the previously project base adopted project cost of \$335M to a current project cost of \$391.1M with options to add back \$12.7M. The project cost including the recommended added elements brings the estimated total cost of the IOS to \$403.85 million with the available/ forecasted revenue of \$407 million.

**SUMMARY OF CURRENT POLICY AND MILESTONES:**

After the voters approved Measure Q in November of 2008, SMART embarked upon an Advanced Conceptual Engineering (ACE) effort to further define the project and in turn, better define the cost of the overall project. SMART concluded the ACE effort in the fall of 2010 and determined that the project would cost approximately \$695M, an 18% increase over the June 2009 conceptual cost estimate of \$589M. In addition, the economy faltered in 2009, reducing SMART's tax revenue and the amount of bonding capacity to fund the project.

Your Board convened a public workshop in November 2010 to review the funding and increased project cost. At the conclusion of the workshop, staff was directed to pursue the 70-

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**750 Lindaro Street, Suite 200  
San Rafael, California 94901  
(415) 226-0880 / (Fax) 226-0881**

mile project in a phased approach, with an Initial Operating Segment (IOS) from Railroad Square in Santa Rosa to the Civic Center in Marin County as the first phase. The estimates in place at the time of the workshop showed a funding shortfall of approximately \$45M within the proposed IOS. Staff identified a number of cost saving measures to offset the shortfall which included eliminating the need to construct the IOS under freight operations, staging the build-out of the Operations and Maintenance Facility (OMF), replacing ticket vending machines with on-board fare collection, and consideration of contracting out the operation and maintenance of the system. It was acknowledged that this last item would require a legislative change.

The Metropolitan Transportation Commission (MTC) was invited to review the cost estimates and funding plan and to provide guidance on SMART's eligibility for Federal Transit Administration (FTA) funding. At your Board's invitation, MTC representatives attended the SMART Board meeting in December 2010 to present their independent review, which determined that SMART's cost estimate was reasonable and sound. MTC also reported that the region (Bay Area) would not likely support SMART in pursuing FTA funding as there were many other regional projects with higher priority.

MTC also indicated that SMART's IOS funding plan included Regional Measure 2 (RM-2) funding that had been awarded to SMART, but which had been limited by MTC board action to apply toward the downtown San Rafael to Larkspur portion of the project. A portion of the overall RM-2 funding had been used for SMART's share of the Cal Park Tunnel Reconstruction Project. MTC strongly encouraged SMART to extend the IOS to downtown San Rafael in order to make a logical initial segment to connect the two major cities in each county, and to provide connectivity to the existing bus transit center in downtown San Rafael. Your Board directed staff to include downtown San Rafael in the IOS at your January 2011 Board meeting.

In April 2011, your Board unanimously approved staff's recommendation to proceed with the issuance of bonds for the IOS. At the same meeting, staff was directed to adopt a cost deferral list of project elements totaling \$88M. The deferrals included such items as ticket vending machines, two stations, the Novato Creek and Petaluma River bridge replacements, and other significant project elements. With these deferrals, the project's remaining funding gap totaled \$21 million. SMART's partners – MTC, the Transportation Authority of Marin (TAM), and the Sonoma County Transportation Authority (SCTA) – have since agreed to assist us in closing the previously reported shortfall with MTC Commission scheduled to make the final decision at their July 27, 2011 hearing subject to certain requirements to be complied with on our part.

In preparation for bonding, your Board also requested that an updated Financial Plan over the period of Measure Q be prepared by staff, re-examining all cost and revenue assumptions as well as project risks and contingencies. Due to the need for SMART's Chief Financial Officer, who was at that time also acting as Interim General Manager, to focus on the many critical aspects leading up to the issuance of bonds, your Board contacted Marin County Board of Supervisors who agreed to allow my temporary assignment as your Executive Director, to work with staff to take a fresh look at costs and assumptions, including the many complex and interrelated elements of any large-scale capital transportation project. Your Board directed me to perform this analysis in a timely fashion and to share the resulting findings publicly at the earliest opportunity at a Public Board meeting.

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Since that time, staff has performed an exhaustive review of assumptions, schedule, unit prices and quantities, and looked for alternative approaches that can be considered by your Board to deliver the IOS, with an eye toward avoiding duplication and retaining conservative estimates. The results of this analysis, presented here, provides your Board with several options to refine and reduce the list of deferred project elements, while maintaining a financially balanced funding plan for the IOS.

**COST REVIEW:**

1-Your Board's decision to add the Marin Civic Center to downtown San Rafael segment to the IOS is a key element in the utility of the IOS and access to regional funds. However, when this component was added to the IOS, it was acknowledged that certain aspects of funding this addition would need to be examined by staff. The later estimates captured most of this cost, but upon more in-depth review, staff is recommending that \$4 million in additional Systems and Grade Crossing costs be allocated for this portion.

2- When System cost was estimated for the entire project length and later on IOS was selected; the system cost was reduced using what appears to be more of a straight line cost estimate as opposed to the more calculated cost of system in IOS. Additionally contingency funds allocated to the cost of a Positive Train Control (PTC) system in our opinion is underfunded and should be increased. PTC is a federally mandated fail-safe signaling system that the Federal Railroad Administration (FRA) instituted (after the passage of Measure Q), as a result of the tragic collision in 2008 between a passenger train and a freight train in Southern California, for implementation by rail agencies where commuter service interoperates with freight (whether or not the commuter system uses FRA-compliant railcars) nationwide by December 2015.

This is an example of the dynamic nature of costs in capital projects as previously discussed. Rail agencies nationwide are struggling to comply with this significant and unfunded federal mandate. This new federal requirement, in its most recent form, has not yet been fully implemented by any agency and thus has potential for a greater proportion of unknowns. The American Public Transportation Association (APTA) released a statement in March of this year urging congress to provide federal funding to address this substantial investment requirement, and to consider extending the deadline beyond the December 2015 date, in recognition of the funding and implementation challenges this new requirement presents.

While we are exploring other options that may be available to us; at this point we do not recommend any alteration in the planning for the PTC requirement at this time.

As a result of these two system issues, we recommend that an additional \$26 million be assigned to the system component of the IOS

3- Budget assumptions for Administrative Staff & Professional Services were reviewed. Please note that the project requires specific professional skill sets for those who design and over see the construction of many portions of the capital projects. It appears that administration and staffing cost estimates are low and out of line with current industry trends. Raising these estimates increases costs by approximately \$10M.

4- The other category comprises several line items related to construction and operations, such as maintenance and service vehicles and equipment, increasing the Track & Bridges estimates

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to better align with a 30% engineering design status, and additional contingencies for Quiet Zones. The cost is \$16.15 million.

#### **SAVINGS & FORECAST ADJUSTMENTS:**

While the current global financial crisis has created significant challenges for SMART, it has also provided a unique opportunity in the world of bond financing and construction that has not been seen in many years. The current climate of extremely favorable interest rates has the potential to make SMART's bonding proceeds potentially greater.

Simultaneously, actual construction bids for transportation projects are in many cases showing a pattern of coming in lower than engineers' estimates. Given this unique opportunity and with the completion of our due diligence review, it is critical that we now proceed towards securing bond financing and releasing our Design-Build Request for Proposals (RFP).

Staff's project review also resulted in some cost estimate reductions. In-depth analysis revealed duplication, in some cases repeated duplications, in estimates of project costs, overhead and contingencies. This resulted from many different consultants working on separate components of the same project where overlapping cost estimate components were not discovered. As summarized in the attached detail sheet, these errors are significant and taken altogether totals nearly \$20M.

Staff's revised estimates address duplication in previous estimates resulting from independent processes by different consultants, as well as bringing additional expertise to bear in reviewing certain prior estimates. For example one consultant had estimated environmental mitigation in the amount of \$5.2M. Further analysis shows that the wetland mitigation component of this estimate can be reduced by constructing retaining walls thereby minimizing disturbance of the wetlands. This strategy alone will save approximately \$1.5 million.

Staff's analysis has shown opportunity for reduction of estimates and/or contingencies in the assumptions for the Design-Build Contract Savings and the Operations & Maintenance contingency. Staff has also proposed simplifying Platform Amenities related to station costs, and the potential to eliminate Gauntlet Tracks in favor of an alternative approach to accommodate freight trains at station platforms.

A review of our construction mobilization and demobilization on a weekly basis has indicated a potential savings of \$10 million. This item requires your Board's policy approval and direction to staff to begin negotiations with the effected parties.

Staff has also taken a close look at the overall IOS schedule, and performed an update that takes into account all current information. As this point of engineering and evaluation, we can better predict where we are in the regulatory permit process and environmental mitigation. This, combined with the information that has arisen as a result of other agencies' efforts to comply with the new FRA Safety PTC requirement, leads us to conclude that prudent project scheduling may realistically require a timeline beyond the end of 2014.

One of the cost savings options staff is suggesting that your Board consider in order to restore several of the deferred items is pushing back the start of revenue operations by 1-2 years.

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While difficult, this action by your Board would save SMART approximately \$12 million per year, and is reflected as an option in the attached Cost Savings Opportunities listing as a range of \$12 - \$24 million.

Lastly, the current financial model includes a conservative sales tax growth rate assumption of 3%, given the current year growth rate of 6%. This is due to the normal after-effects of sale tax revenues "bottoming out" during a recession period; even a slow recovery, such as the one the economy is currently in, results in a higher growth percentage rate.

Taking this fact into account, it is prudent for SMART to assume an additional 1% in the growth rate over the next several years only, which remains fairly conservative. This would result in an additional \$22 million in sales tax revenues during this time period. Should revenues over the next year or two not materialize at this additional rate, staff will return to your Board with a renewed recommendation to consider cost deferrals, either from the original deferral list or other items that may be identified as the project moves forward.

## **CONCLUSION:**

The SMART program is among the largest public works project ever undertaken in the North Bay. It is exceptionally complex with many diverse elements such as vehicles, stations, an operation and maintenance facility, multiple construction contracts, systems testing, employee training, and many other key components and functions that must work together in order for the passenger rail service to be a success. Construction will be completed through a dozen or more contracts that will be advertised at different times in order to prepare the system for revenue service. Just as in any large public works project, costs are dynamic and often in flux until actual contract prices are secured through competitive bidding. The Sonoma-Marin Narrows Project, administered by both the Transportation Authority of Marin and the Sonoma County Transportation Authority (SCTA), has provided similar challenges with changing cost estimates as Caltrans implements this major freeway project. These agencies have found that cost estimates become more certain as the work is better defined through the design process, right-of-way assessment and defining mitigation requirements.

Staff's recommendations result in additional costs to the IOS of approximately \$57M to \$70M. Staff has also identified potential funding sources in the amount of \$70 to \$82M to offset these recommendations. While there is no 100% certainty on any individual project element at this phase of a project of this scope, the options identified for Board consideration illustrate that the concept of passenger rail remains sound and achievable.

I have to emphasize that cost estimates must be kept in context as providing a snapshot in time to measure project feasibility. As proven throughout the history of similar projects, as costs may increase, funding opportunities are likely to materialize as well. That is why it is prudent and in fact imperative that we proceed with the release of design-build RFP so we can truly gauge the markets interest and cost for our IOS project.

SCTA has managed this approach in a very successful manner by developing "shovel ready" contracts. SCTA was recently awarded \$45M in surplus Congestion Management Infrastructure Account (CMIA) funding by the California Transportation Commission (CTC) for the reconstruction of the US101 Petaluma River Bridge, primarily because they had a

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project that was ready to go to construction. This is a current example where project readiness paid off in a demonstrable fashion.

I am pleased to report that the SMART passenger rail project is moving forward in a measured manner in which costs are carefully monitored and funding opportunities are closely pursued.

Long-time project opponents have claimed that a promise was broken. From my perspective as a manager of multiple large-scale capital projects, this is simply not the case. In nearly every city, county, and state – and throughout the world – serious financial challenges abound. From brilliant people in private industry to Nobel Prize winners in major universities, dedicated and skilled people in every segment of our society are working to manage programs and expectations created prior to these tough economic times. Decision makers in every sector are being forced to downsize, phase or reduce until the economic crisis is over.

In the environment in which every private & public agency's revenue has been affected, phasing the project with a reduced initial scope in response to the current economic downturn is the proper course. SMART critics recommend that your Board simply fold. In my considered view, this is not a viable option. SMART has tens of millions of dollars in current contracts which it is legally obligated to pay; SMART owns billions of dollars of property that unless maintained will become an impossible task for overburdened Marin and Sonoma cities/counties to manage. Opponents talk about what SMART is not. I believe it infinitely more appropriate to talk about what SMART is.

SMART is not just a project or a program. SMART is a transportation choice, whose core mission is to complement existing transit options and provide additional transit options in an increasingly congested region. SMART is about construction jobs – we are about to release a civil engineering RFP which, alone, translates into about 900 jobs. SMART will revitalize areas and turn them into places of business and places for people to gather which in turn will boost local economies and produce additional local sales taxes.

SMART has an experienced and competent team in place to implement the project. Passenger rail service in the North Bay will indeed become a reality. The commitment demonstrated by your Board and staff can clearly make this a reality.

Respectfully submitted,

Farhad Mansourian  
Executive Director

C: David Heath  
Bill Gamlen

Attachments

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**Recommended Cost Revisions to the Initial Operating Segment (IOS)**

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| • Engineering/Professional Services and Administrative Staff<br>Project staffing was reduced 6% below industry standards, recommend restoring | \$10.0 M |
| • Non-Revenue Vehicles (Maintenance trucks, service vehicles, equipment)<br>Additional costs of renting maintenance equipment                 | \$0.75 M |
| • Operations and Maintenance Facility (OMF)<br>Portion of costs in the original deferral list; recommend restoring                            | \$11.0 M |
| • Systems (Train signaling & communications)<br>Positive Train Control (PTC) revised estimate & contingencies                                 | \$26.0 M |
| • IOS-1 Contract – Track & Bridges<br>Cost refinement reflecting 30% Engineering Design   | \$1.6 M  |
| • Downtown San Rafael Extension<br>Cost of systems and grade crossings work between Civic Center & Downtown S.R.                              | \$4.0 M  |
| • Quiet Zones<br>Additional costs of signals and medians to create quiet zones  | \$2.8 M  |

**Recommended Cost Additions to restore previously deleted project elements to IOS**

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| • Fare Collection System (coordinate with MTC's Regional system)<br>In the original deferral list; however, recommend restoring to avoid revenue impact | \$4.3 M |
| • Closed Circuit TV<br>In the original deferral list; recommend restoring as a highly desirable safety and security feature                             | \$3.4 M |
| • Novato Creek Bridge<br>In the original deferral list; recommend restoring to avoid service interruptions during storm events                          | \$5.0 M |

<b>TOTAL:</b>	<b>\$68.9 M</b>
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### Potential Savings & Revenue Adjustments

- IOS-1 Design-Build Contract Bid Savings \$5.0 M  
Refinement in cost estimate
- Stations & Platform Amenities \$4.5 M  
Simplified platform amenities; eliminate costly materials & defer landscaping
- Operations & Maintenance (O&M) Savings \$10.2 M  
Reduce the O&M contingency from 20% to 15% as appropriate for current project phase
- Revenue Operations \$12 - \$24 M  
Option for 1-2 year deferral; portion to allow for permitting & regulatory approvals, remaining time period represents Board option for cost savings
- Eliminate freight restrictions during construction \$10.0 M  
Allows contractor to construct track without the constraints of accommodating freight trains; discussions with NWP indicate preliminary agreement
- Eliminate Gauntlet Tracks \$6.0 M  
Make platform modifications in lieu of track and switches to accommodate freight trains at platforms
- Sales Tax Forecast Adjustment \$22.0 M  
Reflects 1% adjustment over the next several years to track with current trend in post-recession rate

**TOTAL:           \$69.7 - 81.7 M**

In an effort to take as conservative an approach as possible, this analysis does not include any potential state or federal funding opportunities, such as the TIGER grant of \$17.6 million for the multi-use pathway being advanced for consideration via a recent action by MTC. Any new state or federal funds that materialize over time will be included as additions to the baseline financial plan.